



# VEA

VEHICLE ELECTRONICS AND ARCHITECTURE

Michigan Chapter  
**NDIA**  
National Defense Industrial Association

## VICTORY VALIDATION – AN INTRODUCTION AND TECHNICAL OVERVIEW

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# Agenda

- VICTORY Standards Process Overview
- Validation Team Responsibilities
- Experiment Guidelines and Philosophy
- Initial Validation Status

# Why Use VICTORY Standards?

## “Stove-Pipe Solutions”



- Multiple GPS units
- Multiple SPUs
- Multiple displays

## “Shared Services”



- Shared GPS unit(s)
- Shared SPU(s)
- Shared display(s)

# Creating the Victory Standard

- VICTORY Standards Support Office (VSSO)
  - Oversee standards development
  - Market to the community
- Working Groups
  - Research technology
  - Develop specifications
  - Create standards documents
    - Schemas/WSDLs
    - VICTORY Standards Specification



# Maturing the Specifications: Validation Team

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- Ensure clarity and completeness
- Provide reference implementations



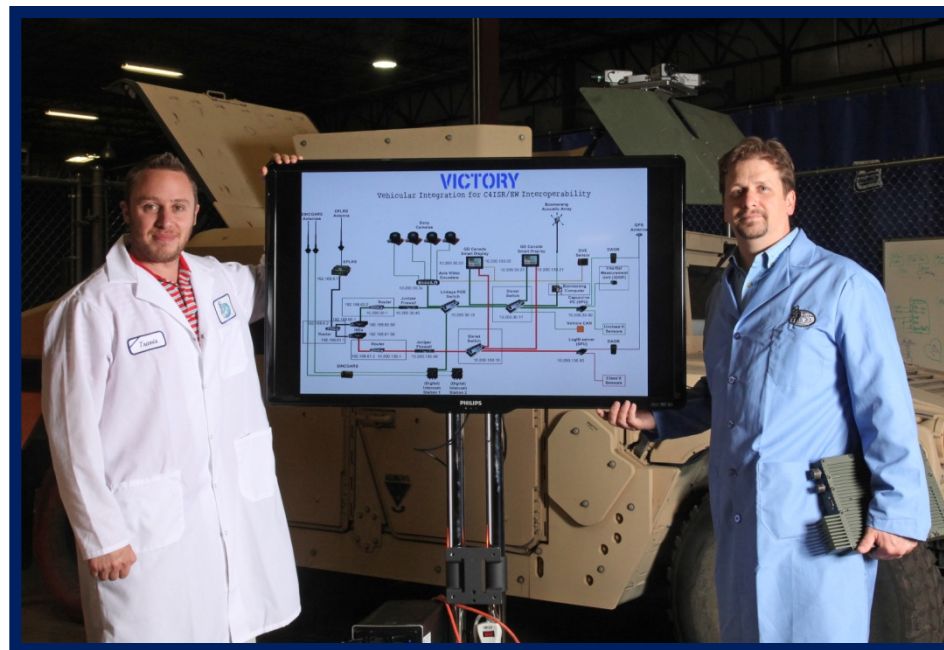
# Validation Team Structure

- Software Lead



- Experiment Lead

- Software Developer



# Software Lead Responsibilities

- Overall source code design
  - Ensure new components fit
- Source code repository
  - Configure individual experiment repositories
  - Maintain master repository
    - Bug fixes
    - Merges
- Coding standards enforcement
  - Ensures software developers follow the standard



# Experiment Lead Responsibilities



- Experiment plan
  - Develop/Document plan
    - Goals
    - Logical/Physical Design
    - Procedures
- Conduct experiment
  - Evaluate VICTORY Specification
    - Specification Document, Schemas, & WSDLs
  - Document findings/make recommendations
- Maintain issue tracking system
- Schedule experiment reviews

# Software Developer Responsibilities



- Evaluate VICTORY Specification
  - Specification document
  - Schema & WSDLs
- Document findings
  - Anomalies/ambiguities
  - Make recommendations
- Develop software
  - Implement reference components
  - Follow the VICTORY Coding Standard



# Validation Experiment Guidelines



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- Goals
  - Mature standards
  - Ensure clarity
  - Reference functional components
- Multiple independent evaluations
  - Evaluators
    - Experiment Lead
    - Software Developer
  - Artifacts
    - Specification Document
    - Schema & WSDLs
- Provide feedback to Working Groups & VSSO
  - Detailed experiment results
  - Recommendations for removing ambiguities

# Validation Experiment Philosophy

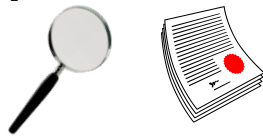
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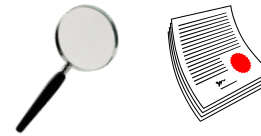
**Experiment Lead**



**Evaluate Specifications**



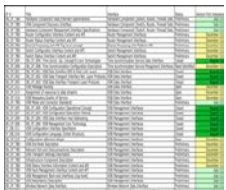
**Evaluate Specifications**



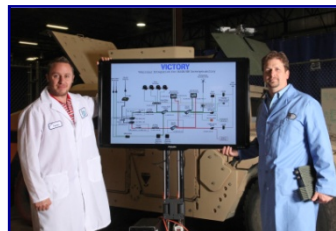
**Software Developer**



**Initial Validation Plan**



**Initial Validation Experiment**



**Implement Software Components**



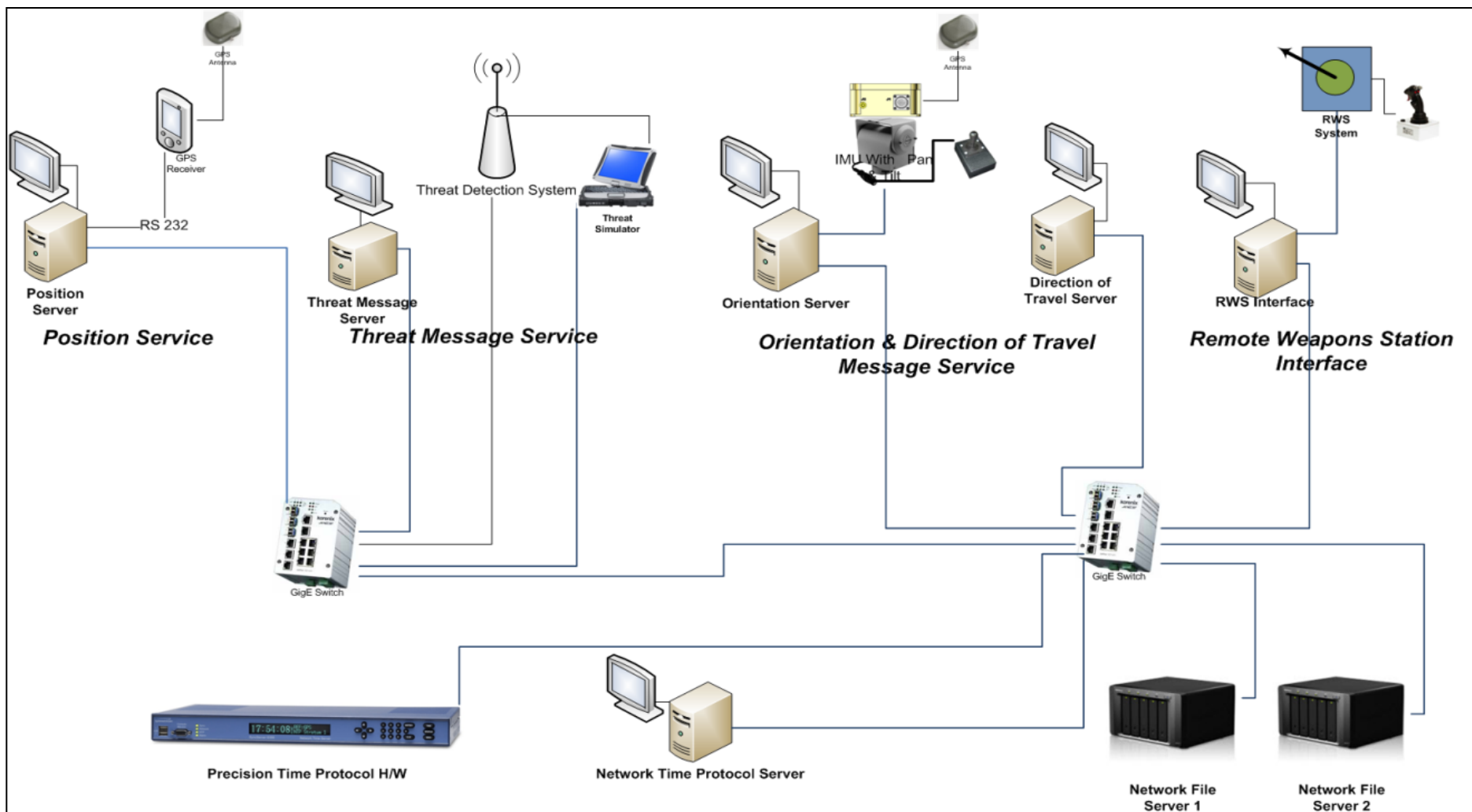
# Initial Validation Status

Specification Version	Number of Experiments	Number of Proposed Specifications
1.0	20	108
1.1	14	35
1.2	16	37
1.3	~12	~20
1.4	~18	~45
Total	~80	~240

# VICTORY Services network as implemented in the VICTORY SIL

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# Additional Validation Status

Specification Version	Number of Experiments	Number of Proposed Specifications
1.0	45	96
Total	45	96

- VICTORY Standards Process
  - Move from “stove-pipe” to shared services
- Validation Team Responsibilities
  - Software Lead Responsibilities
    - Overall validation software
  - Experiment Lead
    - Overall experiment
  - Software Developer
    - Functional components





# Summary: Guidelines and Initial Status



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- Validation Experiment Guidelines and Philosophy
  - Independent evaluations
    - Ensure the specifications: clear and complete
  - Provide reference functional components
- Initial Validation Status
  - 136 specifications at proposed level
  - 69 capabilities